

Federica MANTEGAZZINI - CV

Federica Mantegazzini is an experimental physicist and a researcher at Fondazione Bruno Kessler (FBK) in Trento, Italy. Her research interests cover multiple aspects, from cryogenic detectors for particle physics to superconducting quantum circuits and sensors.

F.M. obtained her Master Degree in Physics at the University of Milano Bicocca (Italy) in 2015 with a thesis in the field of high energy physics at CERN (Switzerland). In 2016 F.M. started to work in the field of low temperature physics and superconducting sensors during an internship at Heidelberg University (Germany), where she continued working during her doctoral studies. She obtained her PhD in Physics in 2021 with a thesis on the development of high resolution cryogenic detectors for neutrino physics, under the supervision of Prof. Loredana Gastaldo. After a short postdoc at Heidelberg University, F.M. moved to Trento with a Tenure Track position at Fondazione Bruno Kessler (FBK), with the goal of setting up a research line for the development of superconducting quantum devices. Currently, she is coordinating a research team at the Sensors & Devices Centre at FBK. The research activities of the team cover the design, microfabrication and cryogenic measurements of superconducting devices, such as Josephson junctions-based quantum circuits, superconducting parametric amplifiers and qubits. Such devices find applications in the emerging fields of Quantum Sensing and Quantum Computing, as well as in circuit Quantum Electrodynamics (cQED) and particle physics experiments.